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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,467	11/20/2001	Shawn Gettemy	PALM-3688	3779

7590 08/25/2004

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EXAMINER	
LIU, MING HUN	

ART UNIT	PAPER NUMBER
2675	9

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/991,467	GETTEMY ET AL.	
	Examiner	Art Unit	
	Ming-Hun Liu	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-32 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-5 and 10-32 is/are rejected.

7)☒ Claim(s) 6-9 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 8.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 3-5, 10, 11, 16-20, 25 and 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishkin.

In reference to claim 1, Fishkin discloses a portable computer comprising a bus, a processor (refer to figure 1 where the lines are buses and processor element is item 24 as explained on column 5, line 4) where the housing is made of an electronic muscle material (column 3, lines 4-9). Fishkin also discloses a display device with a selectable hand writing display where the processor causes the display area to be displayed in response to the handing of the muscle material (column 3, lines 28-37).

Fishkin however, does not explicitly limit the housing material to dielectric elastomer. On the other hand, on column 5, line 61-column 6, line 10, Fishkin does indeed describes the ideal material for his device. The material that Fishkin describes is a polymeric bilayer material with deformable electric sensing capabilities. One skilled in the art understands that dielectric elastomer is a polymer material that is electrically sensitive. Seeing that dielectric elastomers satisfy Fishkin's material requirements, it would have been obvious to use dielectric elastomers in Fishkin's invention. It would have been obvious to one skilled in the art to use dielectric elastomers as a substitute for

the required deformable material also eliminating the requirement of having a bilayer material.

In reference to claim 3, by referring to column 3, lines 28-32, it is clear that Fishkin teaches that the muscle material is used to detect the right or left-handedness of the user

In reference to claims 4 and 5, the sleep and wake mode detection feature is extremely common to the art, examples can be found in almost every PDA, laptop, computer display and monitor. Fishkin offers on column 20, line 13 and column 18 line 12, different methods of entering and exiting sleep mode.

One skilled in the art understands that a sensing component, such as the electronic muscle material, can be easily used to signal the computer system to transition between sleep and wake modes.

It would have been obvious to one skilled in the art to implement this sleep and wake feature because it is a well-known, established solution, for conserving power in electronic devices.

In reference to claim 10, Fishkin discloses in his invention visual and non-visual feedback to the user (column 5, lines 7-10). Several non-visual feedback methods are possible and Fishkin teaches various possibilities on column 7, lines 45-60. On line 57 Fishkin specifically teaches "tactile based feedback" which as one skilled in the art understands may include vibrations.

In reference to claim 11, Fishkin teaches a device that has a deformable surface. The molding to a person's hand to enhance the ergonomics is a limitation that inherent to the Fishkin's device. Though not explicitly stated in the specifications, one skilled in the

art understands that because of the deformable material discussed by Fishkin, naturally the device would have more of an ergonomic fit.

Claim 16 is rejected on grounds presented in the rejection of claims 1, 4 and 5.

Claims 17-20 are rejected on grounds presented in the rejections of claims 3, 6 and 7.

Claim 25 is rejected on grounds presented in the rejection of claim 3.

Claim 28 is rejected on grounds presented in the rejection of claims 4 and 5.

Claims 29-32 is rejected on grounds presented in the rejection of claims 4 and 5.

3. Claims 2 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishkin and Pelrine, a SRI international reference as noted in the background to the invention.

Fishkin teaches that the computer system include a power supply (item 25) that is a rechargeable battery (column 5, lines 12-15).

Fishkin, however does not teach that the battery can be charged by the movement of the muscle material.

As explained by Ron Pelrine, dielectric elastomers are conventional muscle materials that have energy generating functions. With both the muscle material and rechargeable battery in place, it would haven been simple to connect the two elements together to take advantage of the energy generating properties of the muscle material.

It would have been obvious to one skilled in the art to connect the two elements together since Pelrine clearly outlines that in the introduction that, dielectric elastomer

materials should be used "in harvesting available mechanical energy for low-power devices" (paragraph 2, line 5).

4. Claims 12 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishkin and US Patent 4,857,916 to Bellin.

Fishkin's invention lacks a user identification system activated through reading of the contour of the hand. However, the idea of biometric identification using the hand shape memory is common to the art. As Bellin explains in his invention it is possible to use identify a user by analyzing the grip of the user.

Due to the fact that hand contour identification is well known technology and in light of Bellin's disclosure, the deformable material in Fishkin's invention could be used pressure sensing in Bellin's invention.

One skilled in the art would have implemented Ito's invention in order to add an addition user security feature.

5. Claims 13-15 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishkin and Kornbluh, a SRI international reference as noted in the background to the invention.

In reference to claims 13-15 and 21-24, the applicant describes possible uses for the electronic muscle material. These possible usages are well known in the art and are described by Kornbluh article. In section 4.5 Kornblush describes the use of the electronic muscle materials in acoustic actuation. In section 4.9 he teaches the use of the material in diaphragms. Kornblush does not go into detail about the exact application of

the material, but offers the necessary information for ones skilled in the art to apply in future constructions. As demonstrated by Kornbluh, the concept of using muscle material for acoustics is not a novel idea.

Response to Arguments

6. Applicant's arguments with respect to claims 1, 16 and 29 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's arguments with respect to claims 4 and 5 have been considered but are not convincing. Fishkin teaches in the background section of his invention that several interface designs have been known to ones skilled in the art that power-up and power-down portable electronic devices (column 1, lines 28-54). Fishkin teaches several alternate designs and offers several different handling possibilities to activate the different power states thus anticipating the claimed limitation.

In reference to applicants arguments concerning claims 13 and 21, according to case In re Keller, 208 USPQ 871 (CCPA 1981), the applicant cannot show non-obviousness by attacking references individually where, as the rejection is based on the combination of references. The motivation to combine is obvious as Fishkin's invention requires an acoustic device and as Kornbluh outlines, dielectric elastomers have such acoustic abilities. Nowhere in the claim does the applicant specify exactly on how the dielectric elastomer is used in the construction of the speaker. Therefore in the current form, claims 13 and 21 are still rejected under that same reasoning.

Allowable Subject Matter

8. Claims 6-9 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ming-Hun Liu whose telephone number is 703-305-8488. The examiner can normally be reached on Mon-Fri.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ming-Hun Liu

DENNIS-DOON CHOW
PRIMARY EXAMINER